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# Multifunctional DC Inverter

What is a multifunctional converter?

Vitesco Technologies is developing a multifunctional converter that integrates the functions of the onboard-charger, DC/DC boost and traction inverter. This concept supports the transition from a cluster architecture to an even more centralized and modular E/E architecture.

What are the advantages of a siifc inverter?

Moreover, the proposed inverter comes with the added benefits of lower count of power components (eight switches) and single DC source. Additionally, a SIIFC converter, which entails both SEPIC and Isolated Flyback converter is also proposed in this work.

Can a DC/DC converter be integrated into a single unit?

Integrating the OBC, DC/DC converter and inverter into a single unit served to achieve several goals simultaneously, Figure 4. In addition to the abovementioned higher packaging density, an increase in the efficiency of all conversion tasks was pursued.

How many switches are in a MLI inverter?

The proposed MLI design is based on H-bridge inverter and it comprises of eight switches as seen in Fig. 6. The proposed reduced switch 31-level inverter achieves significant simplification over conventional MLI topologies by minimizing the number of active switching devices and DC sources required to generate multiple voltage levels.

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Multilevel multifunctional inverter (ML-MFI) is one of the most important technologies in PV based electrical power generation. ML-MFI technology is based on the synthesis of the ...

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The invention discloses a direct current variable frequency multifunctional air conditioning system comprising a multi-online air conditioner, an afterheat recycling device, a hot pump water ...

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